

Pt ID:
MBS date:
Clinician/Rater:

Instructions:

1. Score Penetration-Aspiration Scale (PAS) and percent residue for each bolus trial in Table 1 (Page 1).
2. Assign Safety and Efficiency Grades (circle your response on Page 2).
3. Assign DIGEST score (circle your response on Page 2).

Penetration-Aspiration Scale (PAS)

I. When to rate PAS: Assign a PAS rating for each bolus trial based on all swallow attempts for that bolus

II. PAS Scores (Rosenbek, 1996):

- 1 Material does not enter the airway
- 2 Material enters the airway, remains above the vocal folds, and is ejected (no residue)
- 3 Material enters the airway, remains above the vocal folds and is NOT ejected from the airway (visible residue remains)
- 4 Material enters the airway, contacts the vocal folds, and is ejected from the airway (no residue)
- 5 Material enters the airway, contacts the vocal folds and is NOT ejected from the airway, (visible residue remains)
- 6 Material enters the airway, passes below the vocal folds and is ejected into the larynx or out of the airway (no subglottic residue visible)
- 7 Material enters the airway, passes below the vocal folds, and is NOT ejected from the trachea despite effort (visible subglottic residue)
- 8 Material enters the airway, passes below the vocal folds, and NO effort is made to eject the material (visible subglottic residue)

Do not score penetration/aspiration for a bolus trial after strategies are cued (*e.g.*, cued throat clear, chin tuck, *etc.*).

Source: Rosenbek, J. C., Robbins, J. A., Roecker, E. B., Coyle, J. L., & Wood, J. L. (1996). A penetration-aspiration scale. *Dysphagia*, 11(2), 93-98.

Pharyngeal Residue

When to rate residue: Judge pharyngeal residue after the completion of the 1st swallow. The amount of residue after the initial/primary swallow is the basis for the score, regardless of how much residue is left after any additional clearing swallows or strategies. Watch what enters and exits the pharynx. Estimate the proportion of what entered the pharynx that remains in the pharynx (not clearing thru the cervical esophagus) after the first swallow. The first swallow is the initial or primary swallow of a bolus after oral transfer (not spill) to the pharynx. Entry to the pharynx is defined as bolus passing the ramus of the mandible. Do not include residue from prior bolus trials in the estimation of residue. In instances where new bolus and prior residue are indistinguishable, again watch the amount of new bolus entering pharynx and amount of bolus exiting pharynx to derive the proportion remaining.

Start Time/ Frame MM: SS		Penetration/Aspiration	PAS Amount t=trace n=neither g=gross	Pharyngeal Residue	Not evaluable	Not given
	Thin	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Thin	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Thin	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Thin	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
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	Nectar	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
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	Nectar	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Honey	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Honey	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Honey	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Pudding	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Pudding	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Cracker	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	Cracker	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		
	MAX	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> t <input type="checkbox"/> n <input type="checkbox"/> g	<input type="checkbox"/> 0-9% <input type="checkbox"/> 10-49% <input type="checkbox"/> 50-90% <input type="checkbox"/> >90%		

Project:

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Video Identifier: _____

DIGEST™@v2

PAS Modifiers
(Frequency/amount of PAS)

Safety Grade

Safety Grade

Maximum Penetration-Aspiration Scale Score

- Maximum PAS score over all bolus trials

- Rate based on liquid, pudding, and solid (cracker/cookie) bolus presentations

- Do NOT rate a bolus trial after strategies were applied

PAS: 1-2
No PAS or flash pen above TVF

PAS: 3-4
Silent pen above TVF or flash pen to TVF

PAS: 5-6
Silent pen to TVF or flash asp

PAS: 7-8
Asp not cleared, silent or sensate

Single event

Intermittent or chronic

Single event, not gross

Intermittent or chronic

Single event, not gross

Intermittent, not gross

Chronic, not gross

Gross, not chronic

Chronic and gross

Grade 0

Grade 0

Grade 1

Grade 1

Grade 2

Grade 1

Grade 2

Grade 3

Grade 4

If any add'l bolus trials PAS=5-6, upgrade to safety grade 2

Frequency/pattern of PAS If max PAS ≥3 , select how frequently the maximum PAS range 3-4, 5-6 <u>or</u> PAS 7-8 occurred:	Amount of PAS If max PAS ≥5 , amount of barium on or below TVF based on worst performance on any single bolus:
<input type="checkbox"/> Single event <input type="checkbox"/> Single+ (max PAS 7-8 only) <input type="checkbox"/> Intermittent (on multiple but <50% of trials on a single consistency) <input type="checkbox"/> Chronic (majority [≥50%] of thin liquid trials and/or on >1 consistency)	<input type="checkbox"/> Trace (resembles faint coating, droplets or trickle of barium on/below TVF) <input type="checkbox"/> Neither trace nor gross <input type="checkbox"/> Gross (> 25% of bolus volume)

Efficiency Grade

Maximum Percent of Pharyngeal Residue (% PR)

- Maximum estimated percentage (proportion) of bolus residue in pharynx over all bolus trials

- Rate based on liquid, pudding, and solid (cracker/cookie) bolus presentations

- Rate based on estimated percent of pharyngeal residue after initial swallow attempt of each bolus

- Do NOT rate based on oral residue

- Do NOT rate a bolus trial after strategies were applied

% PR: < 10%
Minimal to no residue

%PR: 10-49%
Less than half residue

%PR: 50-90%
Majority residue

%PR: > 90%
Near complete residue

Pattern of Residue
(Across liquid, pudding, or cracker/cookie bolus types)

Efficiency Grade

All bolus types presented

Any bolus type (liquid, pudding, and/or cracker/cookie)

Solids only (cracker and/or cookie)

Liquid and/or pudding

Any (but not all) bolus types presented

All bolus types presented

Grade 0

Grade 1

Grade 2

Grade 3

Grade 3

Grade 4

DIGEST Score (Interaction of Assigned Safety and Efficiency Grades)

	S0	S1	S2	S3	S4
E0	0	1	2	3	3
E1	1	1	2	3	3
E2	1	2	2	3	3
E3	2	2	3	3	4
E4	3	3	3	4	4

1 = Mild

2 = Moderate

3 = Severe

4 = Life threatening

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